Aero Design Ltd.

Work Order Control Sheet

Work Order#: 2016-99 **Date Opened:** 04 August 2016 **Title:** Fabrication

Aircraft OEM: Airbus Helicopters **Aircraft Model:** AS350/AS355 **Product Type:** Beams **Product Model:** Forward **Quantity:** 30

Work Order Contents

	Initial or N/A
Work Order/Build Sheets (Procedures Provided)	JC
Additional Work Sheets (Standard Practice)	N/A
Drawings (See List Below)	JC
Parts Distribution Sheet	JC
Sub Component Tags	N/A
Completed Certification (Original)	JC
Time Sheet (R&D)	N/A
Notes	N/A

Build Sheet Contents

Tasks Initialled	JC
Dual Inspections Initialled	JC

Drawing List

Drawing #	Rev #	Description	Initial or N/A
78634	2	Forward Beam	JC
78635	0	Forward Beam	JC

Traveller

Component Completion

	As Instructed
Quantity Complete on This Work Order	30
Quantity Incomplete on This Work Order	N/A
Further Processing Required Before Release	N/A
Release to Stock as Components	N/A

Certification

	Initial or N/A
Form One Completed	JC
Serviceable (Green) Tag Completed	N/A
In Process (Yellow) Tag Completed	N/A
Unserviceable (Red) Tag Completed	N/A
Parts Tracking Tags (White) Completed	JC
Parts Placed in Stores for Distribution	JC

Additional Documentation

	Initial or N/A
Documentation of a minor change	JC
Non-Conformance Report Required	N/A
Service Difficulty Report Required	N/A

Billing

Local (Aero Design)	JC
Research and Development	N/A
Third Party	N/A

Notes

78634 Rev. 1 with minor change is 78634 Rev. 2
78634 Rev. 2 is 78635 Rev. 0

I used for demonstration, no Form 1 issued JC.

Work performed by:	Print: D. Bartfai	Sign: C.C. for D. Bartfai	SCA: AD07	Date: 18-Jan-17
ICC / Dual Inspection preformed by:	Print: J. Rekve	Sign:	SCA: AD01	Date: 18-Jan-17
Work Order closed by:	Print: J. CLARKE	Sign:	SCA: AD02	Date: 15 Sept 17

Aero Design Ltd.
9888 A Malaspina Rd. Powell River, BC, V8A 0G3
Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: Fwd Beam Pad No. of pieces: 10
Manufacturer: Aero Design Ltd
Part No.: 78634-12 Serial/Batch No.: 15073
TTSN: N/A TSO: N/A Rem.: N/A
Work Order No.: 2016-99
Remaining Tasks to be Performed: Web in place

Signature:
Date: Aug 5th/2016 Lic. No. / SCA AD-07

In Process

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AMF 73-04

Remarks

In Process

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AMF 73-04

Nomenclature: Bushing No. of pieces: 120

Manufacturer: Aero Design Ltd

Part No.: 78630-04 Serial/Batch No.: 15073

TTSN: N/A TSO: N/A Rem.: N/A

Work Order No.: 2016-99

Remaining Tasks to be Performed: Weld in place

Signature:

Date: Aug 5/16 Lic. No. / SCA AD-07

Form# 20.E.03 Rev. 1 24 April 2014

In Process

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AMF 73-04

In Process

Remarks

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AMF 73-04

Nomenclature: Guide No. of pieces: 96

Manufacturer: Aero Design Ltd.

Part No.: 69830-11 Serial / Batch No.: 14103

TTSN: N/A TSO: N/A Rem.: N/A

Work Order No.: 2016-16

Remaining Tasks to be Performed: weld in place

Signature:

Date: Feb. 12/2016 Lic. No. / SCA AD-05

Form# 20.E.03 Rev. 1 24 April 2014

In Process

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AMF 73-04

Remarks

In Process

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AMF 73-04

Nomenclature: Pad No. of pieces: 20
Manufacturer: Aero Design Ltd
Part No.: 78634-11 Serial/Batch No.: 16058
TTSN: N/A TSO: N/A Rem.: N/A
Work Order No.: 2016-99
Remaining Tasks to be Performed: Weld in place

Signature:
Date: Aug 29th/2016 Lic. No. / SCA AD-07

In Process

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AMF 73-04

Remarks

In Process

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AMF 73-04

Nomenclature: Pad No. of pieces: 20

Manufacturer: Aero Design Ltd

Part No.: 78634-12 Serial/Batch No.: 16058

TTSN: N/A TSO: N/A Rem.: N/A

Work Order No.: 2016-99

Remaining Tasks to be Performed: Weld in place

Signature: [signature]

Date: Aug 29th/2016 Lic. No. / SCA AD-07

Form# 20.E.03 Rev. 1 24 April 2014

In Process

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AMF 73-04

In Process

Remarks

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Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: Pad No. of pieces: 60
Manufacturer: Aero Design Ltd.
Part No.: 78634-03 Serial/Batch No.: 16058
TTSN: N/A TSO: N/A Rem.: N/A
Work Order No.: 2016-99
Remaining Tasks to be Performed: Weld in place

Signature:
Date: Aug 29th/2016 Lic. No. / SCA AD-07

In Process

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AMF 73-04

In Process

Remarks

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AMF 73-04

Nomenclature: Fwd Beam Pad No. of pieces: 30
Manufacturer: Aero Design Ltd
Part No.: 78634-03 Serial/Batch No.: 15073
TTSN: NA TSO: NA Rem.: NA
Work Order No.: 2016-99
Remaining Tasks to be Performed: Weld in place

Signature:
Date: Aug 5/16 Lic. No. / SCA AD-07

In Process

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AMF 73-04

In Process

Remarks

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Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: Fwd Beam Pad No. of pieces: 10

Manufacturer: Aero Design Ltd

Part No.: 78634-11 Serial/Batch No.: 15073

TTSN: N/A TSO: N/A Rem.: N/A

Work Order No.: 2016-99

Remaining Tasks to be Performed: Weld in place

Signature:

Date: Aug 5th/2016 Lic. No. / SCA AD-07

In Process

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AMF 73-04

In Process

Remarks

#1
Complete

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam
78634, Revision 1 – Forward Beam

Work Order: 2016-99 Batch Quantity: 30 x 78634

Date Open: 03 Aug 16

	Complete (initial or SCA #)				
1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07
a. Cut 1 x 2 x 0.065 material as indicated on drawings.					
i. 78633-02 – 24.44"					
ii. 78634-02 – 24.25"					
b. Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).					
c. Record material PO on attached material list.					
d. De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.					
e. Remove writing on tubes with acetone.					
f. Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02
2. CNC Machining – 78633-01 / 78634-01					
a. Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.					
b. Run CNC programs to machine blanks for upper guides.					
c. De-burr slots and holes.					
d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.					
3. Beam Fabrication – Components – 78633-01					
Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.					
a. Shear caps from 0.025" sheet: 78633-06					
b. Cut 78633-03 guides from 1x1/8 stock.					
c. Cut and turn 78630-04 bushings from 3/8 x 0.065 tube:					
i. Cut stock to length + 0.03-0.06".					
ii. Face one end flat @ 1000 RPM.					
iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.					
iv. Setup stop and face other end to length @ 1000 RPM.					
v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.					
d. Cut 78633-04 upper guides from blanks machined in step 2.b.					
e. Cut 78633-05 stop brackets from 0.75 x 0.065 tube.					
f. Cut 82735-03 step tubes from 1.0 x 0.035 tube.					
g. Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.					

N/A

h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop. AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

a. Shear caps from 0.025" sheet: 78634-04.
b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
c. Cut and turn 69830-11 guide tubes from ¾ x 0.065 tube:
   i. Cut stock to length + 0.03-0.06".
   ii. Face one end flat @ 1000 RPM.
   iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
   iv. Setup stop and face other end to length @ 1000 RPM.
   v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
d. Cut 69830-07 blocks.
e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

5. Beam Welding – 78633-01 _____

a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
   i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list. N/A
c. Tag in-progress parts for straightening. AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

6. Beam Welding – 78634-01

a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
   i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening. AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

a. Set beam on blocks as far apart as possible on hydraulic press.
b. Use a 2" block to distribute press loads.
c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
d. Check for straight with a straight edge on back of tube.
e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	**Complete** (Initial or SCA #)

8. CNC Machining – 78633-01 / 78634-01
   a. Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
   b. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
   c. De-burr keyways and slots.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01
   a. Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
   b. TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
   d. TIG weld 78633-06 cap to 78633-02 tube.
   e. TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
   f. Record component and welding rod POs / WOs on attached material list.
   g. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

N/A

AD 73-04 05	AD 73-04 05	AD 73-04 05	AD 73-04 05	AD 73-04 05

10. Beam Welding – 78634-01
    a. TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
    b. TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
    c. TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
    d. TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
    e. Record component and welding rod POs / WOs on attached material list.
    f. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07

11. Beam Finishing – 78633-01 / 78634-01
    Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.
    a. Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
    b. Use a 2" block to distribute press loads.
    c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
    d. Check for straight with a straight edge on back of tube.
    e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
    f. Drill out bushings to F (0.257"), four places per beam, on drill press.
    g. Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
    h. Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

AD 73-04 01	AD 73-04 01	AD 73-04 01	AD 73-04 01	Complete (Initial or SCA#) AD 73-04 01

12. Final Inspection – 78633-01 / 78634-01

To be completed by a different person than the previous steps.

a. Inspect beams 78633-01 and 78634-01 for conformity to drawings.
b. Tag in-progress parts ready for powder coating.

AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02

13. Powder Coating

a. Parts are to be powder coated white in accordance with commercial practices.
b. Record powder coating PO.
c. Inspect powder coating on receiving.
d. Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01

To be completed after powder coating.

a. Prepare step tube for grip tape by rubbing top surface with scotch-brite.
b. Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
c. Adhere P/N placard to back surface of beam.
d. Ensure AN4 bolt can be inserted through bushings.
e. Green tag complete beam assembly and place into stock.

N/A

AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02

15. Final Assembly – 78634-01

To be completed after powder coating.

a. Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
b. For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
c. For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
d. If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
e. Adhere P/N placard to back surface of beam.
f. Green tag complete beam assembly and place into stock.

#2
Complete

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam
78634, Revision 1 – Forward Beam

Work Order: 2016-99 Batch Quantity: 30 x 78634

Date Open: 03 Aug 16

					Complete (initial or SCA #)
	AD 73-04 01	AD 73-04 01	AD 73-04 01	AD 73-04 01	AD 73-04 01

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01
   a. Cut 1 x 2 x 0.065 material as indicated on drawings.
      i. 78633-02 – 24.44"
      ii. 78634-02 – 24.25"
   b. Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
   c. Record material PO on attached material list.
   d. De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
   e. Remove writing on tubes with acetone.
   f. Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.

AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02

2. CNC Machining – 78633-01 / 78634-01
   a. Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
   b. Run CNC programs to machine blanks for upper guides.
   c. De-burr slots and holes.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

3. Beam Fabrication – Components – 78633-01
   Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.
   a. Shear caps from 0.025" sheet: 78633-06
   b. Cut 78633-03 guides from 1x1/8 stock.
   c. Cut and turn 78630-04 bushings from 3/8 x 0.065 tube:
      i. Cut stock to length + 0.03-0.06".
      ii. Face one end flat @ 1000 RPM.
      iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
      iv. Setup stop and face other end to length @ 1000 RPM.
      v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
   d. Cut 78633-04 upper guides from blanks machined in step 2.b.
   e. Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
   f. Cut 82735-03 step tubes from 1.0 x 0.035 tube.
   g. Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

N/A

h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

a. Shear caps from 0.025" sheet: 78634-04.
b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
c. Cut and turn 69830-11 guide tubes from ¾ x 0.065 tube:
    i. Cut stock to length + 0.03-0.06".
    ii. Face one end flat @ 1000 RPM.
    iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
    iv. Setup stop and face other end to length @ 1000 RPM.
    v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
d. Cut 69830-07 blocks.
e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

5. Beam Welding – 78633-01

a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
    i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts for straightening.

N/A

AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

6. Beam Welding – 78634-01

a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
    i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

a. Set beam on blocks as far apart as possible on hydraulic press.
b. Use a 2" block to distribute press loads.
c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
d. Check for straight with a straight edge on back of tube.
e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (Initial or SCAN)

8. CNC Machining – 78633-01 / 78634-01 — AC 73-04 02 | AC 73-04 02 | AC 73-04 02 | AC 73-04 02 | AC 73-04 02
   a. Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
   b. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
   c. De-burr keyways and slots.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01 — N/A
   a. Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
   b. TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
   d. TIG weld 78633-06 cap to 78633-02 tube.
   e. TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
   f. Record component and welding rod POs / WOs on attached material list.
   g. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

10. Beam Welding – 78634-01 — AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05
    a. TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
    b. TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
    c. TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
    d. TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
    e. Record component and welding rod POs / WOs on attached material list.
    f. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

11. Beam Finishing – 78633-01 / 78634-01 — AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

    Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.
    a. Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
    b. Use a 2" block to distribute press loads.
    c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
    d. Check for straight with a straight edge on back of tube.
    e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
    f. Drill out bushings to F (0.257"), four places per beam, on drill press.
    g. Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
    h. Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (initial or SCA #)

12. Final Inspection – 78633-01 / 78634-01 — AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01

To be completed by a different person than the previous steps.

a. Inspect beams 78633-01 and 78634-01 for conformity to drawings.
b. Tag in-progress parts ready for powder coating.

13. Powder Coating — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

a. Parts are to be powder coated white in accordance with commercial practices.
b. Record powder coating PO.
c. Inspect powder coating on receiving.
d. Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01 ———

To be completed after powder coating.

a. Prepare step tube for grip tape by rubbing top surface with scotch-brite.
b. Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
c. Adhere P/N placard to back surface of beam.
d. Ensure AN4 bolt can be inserted through bushings.
e. Green tag complete beam assembly and place into stock.

N/A

15. Final Assembly – 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

To be completed after powder coating.

a. Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
b. For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
c. For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
d. If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
e. Adhere P/N placard to back surface of beam.
f. Green tag complete beam assembly and place into stock.

#3
Complete

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam
78634, Revision 1 – Forward Beam

Work Order: 2016-49 Batch Quantity: 30 x 78634

Date Open: 03 Aug 16

Complete (initial or SCA #)

AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01
    a. Cut 1 x 2 x 0.065 material as indicated on drawings.
        i. 78633-02 – 24.44"
        ii. 78634-02 – 24.25"
    b. Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
    c. Record material PO on attached material list.
    d. De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
    e. Remove writing on tubes with acetone.
    f. Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.

AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02

2. CNC Machining – 78633-01 / 78634-01
    a. Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
    b. Run CNC programs to machine blanks for upper guides.
    c. De-burr slots and holes.
    d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

3. Beam Fabrication – Components – 78633-01
    Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.
    a. Shear caps from 0.025" sheet: 78633-06
    b. Cut 78633-03 guides from 1x1/8 stock.
    c. Cut and turn 78630-04 bushings from 3/8 x 0.065 tube:
        i. Cut stock to length + 0.03-0.06".
        ii. Face one end flat @ 1000 RPM.
        iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
        iv. Setup stop and face other end to length @ 1000 RPM.
        v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
    d. Cut 78633-04 upper guides from blanks machined in step 2.b.
    e. Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
    f. Cut 82735-03 step tubes from 1.0 x 0.035 tube.
    g. Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

N/A

h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop. AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

a. Shear caps from 0.025" sheet: 78634-04.
b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
c. Cut and turn 69830-11 guide tubes from ¾ x 0.065 tube:
   i. Cut stock to length + 0.03-0.06".
   ii. Face one end flat @ 1000 RPM.
   iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
   iv. Setup stop and face other end to length @ 1000 RPM.
   v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
d. Cut 69830-07 blocks.
e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

5. Beam Welding – 78633-01 _____

a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
   i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding. N/A
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts for straightening. AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

6. Beam Welding – 78634-01

a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
   i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

7. Beam Straightening – 78633-01 / 78634-01 AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

a. Set beam on blocks as far apart as possible on hydraulic press.
b. Use a 2" block to distribute press loads.
c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
d. Check for straight with a straight edge on back of tube.
e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (initial or SCA #)

8. CNC Machining – 78633-01 / 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

   a. Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
   b. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
   c. De-burr keyways and slots.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01 ———

   a. Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
   b. TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
   d. TIG weld 78633-06 cap to 78633-02 tube.
   e. TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
   f. Record component and welding rod POs / WOs on attached material list. N/A
   g. Tag in-progress parts and place on in-progress shelf in welding shop for straightening. — AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

10. Beam Welding – 78634-01

   a. TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
   b. TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
   d. TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
   e. Record component and welding rod POs / WOs on attached material list.
   f. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

11. Beam Finishing – 78633-01 / 78634-01 — AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

   Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.

   a. Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
   b. Use a 2" block to distribute press loads.
   c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
   d. Check for straight with a straight edge on back of tube.
   e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
   f. Drill out bushings to F (0.257"), four places per beam, on drill press.
   g. Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
   h. Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (initial or SGA #)

12. Final Inspection – 78633-01 / 78634-01 — AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01

To be completed by a different person than the previous steps.

a. Inspect beams 78633-01 and 78634-01 for conformity to drawings.
b. Tag in-progress parts ready for powder coating.

13. Powder Coating — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

a. Parts are to be powder coated white in accordance with commercial practices.
b. Record powder coating PO.
c. Inspect powder coating on receiving.
d. Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01 — N/A

To be completed after powder coating.

a. Prepare step tube for grip tape by rubbing top surface with scotch-brite.
b. Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
c. Adhere P/N placard to back surface of beam.
d. Ensure AN4 bolt can be inserted through bushings.
e. Green tag complete beam assembly and place into stock.

15. Final Assembly – 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

To be completed after powder coating.

a. Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
b. For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
c. For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
d. If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
e. Adhere P/N placard to back surface of beam.
f. Green tag complete beam assembly and place into stock.

#4
Complete

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam
78634, Revision 1 – Forward Beam

Work Order: 2016-99 Batch Quantity: 30 x 78634

Date Open: 03 Aug 16

	Complete (initial or SCA #)				
1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07
2. CNC Machining – 78633-01 / 78634-01	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01
   a. Cut 1 x 2 x 0.065 material as indicated on drawings.
      i. 78633-02 – 24.44"
      ii. 78634-02 – 24.25"
   b. Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
   c. Record material PO on attached material list.
   d. De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
   e. Remove writing on tubes with acetone.
   f. Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.
2. CNC Machining – 78633-01 / 78634-01
   a. Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
   b. Run CNC programs to machine blanks for upper guides.
   c. De-burr slots and holes.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

3. Beam Fabrication – Components – 78633-01

   Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.
   a. Shear caps from 0.025" sheet: 78633-06
   b. Cut 78633-03 guides from 1x1/8 stock.
   c. Cut and turn 78630-04 bushings from 3/8 x 0.065 tube: N/A
      i. Cut stock to length + 0.03-0.06".
      ii. Face one end flat @ 1000 RPM.
      iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
      iv. Setup stop and face other end to length @ 1000 RPM.
      v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
   d. Cut 78633-04 upper guides from blanks machined in step 2.b.
   e. Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
   f. Cut 82735-03 step tubes from 1.0 x 0.035 tube.
   g. Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop. AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

a. Shear caps from 0.025" sheet: 78634-04.
b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
c. Cut and turn 69830-11 guide tubes from ¾ x 0.065 tube:
    i. Cut stock to length + 0.03-0.06".
    ii. Face one end flat @ 1000 RPM.
    iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
    iv. Setup stop and face other end to length @ 1000 RPM.
    v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
d. Cut 69830-07 blocks.
e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

5. Beam Welding – 78633-01 _____

a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
    i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list. N/A
c. Tag in-progress parts for straightening. AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

6. Beam Welding – 78634-01

a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
    i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening. AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

a. Set beam on blocks as far apart as possible on hydraulic press.
b. Use a 2" block to distribute press loads.
c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
d. Check for straight with a straight edge on back of tube.
e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | Complete (Initial or SCA #) 73-04 02

8. CNC Machining – 78633-01 / 78634-01
   a. Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
   b. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
   c. De-burr keyways and slots.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01
   a. Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
   b. TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
   d. TIG weld 78633-06 cap to 78633-02 tube.
   e. TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
   f. Record component and welding rod POs / WOs on attached material list.
   g. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

N/A

AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

10. Beam Welding – 78634-01
    a. TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
    b. TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
    c. TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
    d. TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
    e. Record component and welding rod POs / WOs on attached material list.
    f. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

11. Beam Finishing – 78633-01 / 78634-01
    Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.
    a. Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
    b. Use a 2" block to distribute press loads.
    c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
    d. Check for straight with a straight edge on back of tube.
    e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
    f. Drill out bushings to F (0.257"), four places per beam, on drill press.
    g. Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
    h. Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (initial or SCA #)

12. Final Inspection – 78633-01 / 78634-01 — AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01

To be completed by a different person than the previous steps.

a. Inspect beams 78633-01 and 78634-01 for conformity to drawings.
b. Tag in-progress parts ready for powder coating.

13. Powder Coating — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | 02

a. Parts are to be powder coated white in accordance with commercial practices.
b. Record powder coating PO.
c. Inspect powder coating on receiving.
d. Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01 — N/A

To be completed after powder coating.

a. Prepare step tube for grip tape by rubbing top surface with scotch-brite.
b. Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
c. Adhere P/N placard to back surface of beam.
d. Ensure AN4 bolt can be inserted through bushings.
e. Green tag complete beam assembly and place into stock.

15. Final Assembly – 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | 02

To be completed after powder coating.

a. Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
b. For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
c. For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
d. If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
e. Adhere P/N placard to back surface of beam.
f. Green tag complete beam assembly and place into stock.

#5
Complete

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam
78634, Revision 1 – Forward Beam

Work Order: 2016-99 Batch Quantity: 30 x 78634

Date Open: 03 Aug 16

Complete (initial or SCA #)

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01 — AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07
   a. Cut 1 x 2 x 0.065 material as indicated on drawings.
      i. 78633-02 – 24.44"
      ii. 78634-02 – 24.25"
   b. Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
   c. Record material PO on attached material list.
   d. De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
   e. Remove writing on tubes with acetone.
   f. Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.

2. CNC Machining – 78633-01 / 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02
   a. Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
   b. Run CNC programs to machine blanks for upper guides.
   c. De-burr slots and holes.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

3. Beam Fabrication – Components – 78633-01 _____
   Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.
   a. Shear caps from 0.025" sheet: 78633-06
   b. Cut 78633-03 guides from 1x1/8 stock.
   c. Cut and turn 78630-04 bushings from 3/8 x 0.065 tube: N/A
      i. Cut stock to length + 0.03-0.06".
      ii. Face one end flat @ 1000 RPM.
      iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
      iv. Setup stop and face other end to length @ 1000 RPM.
      v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
   d. Cut 78633-04 upper guides from blanks machined in step 2.b.
   e. Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
   f. Cut 82735-03 step tubes from 1.0 x 0.035 tube.
   g. Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01 **Complete** (initial or SCA #)

h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop. AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

a. Shear caps from 0.025" sheet: 78634-04.
b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
c. Cut and turn 69830-11 guide tubes from ¾ x 0.065 tube:
    i. Cut stock to length + 0.03-0.06".
    ii. Face one end flat @ 1000 RPM.
    iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
    iv. Setup stop and face other end to length @ 1000 RPM.
    v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
d. Cut 69830-07 blocks.
e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

5. Beam Welding – 78633-01 _____

a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
    i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list. N/A
c. Tag in-progress parts for straightening. AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

6. Beam Welding – 78634-01

a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
    i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening. AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

a. Set beam on blocks as far apart as possible on hydraulic press.
b. Use a 2" block to distribute press loads.
c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
d. Check for straight with a straight edge on back of tube.
e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

					Complete (Initial or SCA #)
8. CNC Machining – 78633-01 / 78634-01	AD 73-04 02	AD 73-04 02	AD 73-04 02	AD 73-04 02	73-04 02
9. Beam Welding – 78633-01					
10. Beam Welding – 78634-01	AD 73-04 05	AD 73-04 05	AD 73-04 05	AD 73-04 05	AD 73-04 05
11. Beam Finishing – 78633-01 / 78634-01	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07	AD 73-04 07

8. CNC Machining – 78633-01 / 78634-01
   a. Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
   b. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
   c. De-burr keyways and slots.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01
   a. Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
   b. TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
   d. TIG weld 78633-06 cap to 78633-02 tube.
   e. TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
   f. Record component and welding rod POs / WOs on attached material list. N/A
   g. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

10. Beam Welding – 78634-01
   a. TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
   b. TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
   d. TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
   e. Record component and welding rod POs / WOs on attached material list.
   f. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

11. Beam Finishing – 78633-01 / 78634-01

   Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.
   a. Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
   b. Use a 2" block to distribute press loads.
   c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
   d. Check for straight with a straight edge on back of tube.
   e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
   f. Drill out bushings to F (0.257"), four places per beam, on drill press.
   g. Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
   h. Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (initial or SCA #)

12. Final Inspection – 78633-01 / 78634-01 — AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01

To be completed by a different person than the previous steps.

a. Inspect beams 78633-01 and 78634-01 for conformity to drawings.
b. Tag in-progress parts ready for powder coating.

13. Powder Coating — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

a. Parts are to be powder coated white in accordance with commercial practices.
b. Record powder coating PO.
c. Inspect powder coating on receiving.
d. Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01 — N/A

To be completed after powder coating.

a. Prepare step tube for grip tape by rubbing top surface with scotch-brite.
b. Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
c. Adhere P/N placard to back surface of beam.
d. Ensure AN4 bolt can be inserted through bushings.
e. Green tag complete beam assembly and place into stock.

15. Final Assembly – 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

To be completed after powder coating.

a. Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
b. For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
c. For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
d. If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
e. Adhere P/N placard to back surface of beam.
f. Green tag complete beam assembly and place into stock.

#6
Complete

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam
78634, Revision 1 – Forward Beam

Work Order: 2016-49 Batch Quantity: 30 x 78634

Date Open: 03 Aug 16

Complete (initial or SCA #)

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01 — AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07
   a. Cut 1 x 2 x 0.065 material as indicated on drawings.
      i. 78633-02 – 24.44"
      ii. 78634-02 – 24.25"
   b. Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
   c. Record material PO on attached material list.
   d. De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
   e. Remove writing on tubes with acetone.
   f. Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.

2. CNC Machining – 78633-01 / 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02
   a. Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
   b. Run CNC programs to machine blanks for upper guides.
   c. De-burr slots and holes.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

3. ~~Beam Fabrication – Components – 78633-01~~
   Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.
   a. Shear caps from 0.025" sheet: 78633-06
   b. Cut 78633-03 guides from 1x1/8 stock.
   c. Cut and turn 78630-04 bushings from 3/8 x 0.065 tube: N/A
      i. Cut stock to length + 0.03-0.06".
      ii. Face one end flat @ 1000 RPM.
      iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
      iv. Setup stop and face other end to length @ 1000 RPM.
      v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
   d. Cut 78633-04 upper guides from blanks machined in step 2.b.
   e. Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
   f. Cut 82735-03 step tubes from 1.0 x 0.035 tube.
   g. Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop. AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

a. Shear caps from 0.025" sheet: 78634-04.
b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
c. Cut and turn 69830-11 guide tubes from ¾ x 0.065 tube:
   i. Cut stock to length + 0.03-0.06".
   ii. Face one end flat @ 1000 RPM.
   iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
   iv. Setup stop and face other end to length @ 1000 RPM.
   v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
d. Cut 69830-07 blocks.
e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

5. Beam Welding – 78633-01 _____

a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
   i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list. N/A
c. Tag in-progress parts for straightening. AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

6. Beam Welding – 78634-01

a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
   i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
b. Record component and welding rod POs / WOs on attached material list.
c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening. AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

a. Set beam on blocks as far apart as possible on hydraulic press.
b. Use a 2" block to distribute press loads.
c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
d. Check for straight with a straight edge on back of tube.
e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 **Complete (initial or SCA 04)**

8. CNC Machining – 78633-01 / 78634-01
   a. Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
   b. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
   c. De-burr keyways and slots.
   d. Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01
   a. Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
   b. TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
   c. TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
   d. TIG weld 78633-06 cap to 78633-02 tube.
   e. TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
   f. Record component and welding rod POs / WOs on attached material list. N/A
   g. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05 | AD 73-04 05

10. Beam Welding – 78634-01
    a. TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
    b. TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
    c. TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
    d. TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
    e. Record component and welding rod POs / WOs on attached material list.
    f. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07 | AD 73-04 07

11. Beam Finishing – 78633-01 / 78634-01
    Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.
    a. Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
    b. Use a 2" block to distribute press loads.
    c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
    d. Check for straight with a straight edge on back of tube.
    e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
    f. Drill out bushings to F (0.257"), four places per beam, on drill press.
    g. Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
    h. Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

Complete (initial or SCA #)

12. Final Inspection – 78633-01 / 78634-01 — AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01 | AD 73-04 01

To be completed by a different person than the previous steps.

a. Inspect beams 78633-01 and 78634-01 for conformity to drawings.
b. Tag in-progress parts ready for powder coating.

13. Powder Coating — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

a. Parts are to be powder coated white in accordance with commercial practices.
b. Record powder coating PO.
c. Inspect powder coating on receiving.
d. Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01 — N/A

To be completed after powder coating.

a. Prepare step tube for grip tape by rubbing top surface with scotch-brite.
b. Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
c. Adhere P/N placard to back surface of beam.
d. Ensure AN4 bolt can be inserted through bushings.
e. Green tag complete beam assembly and place into stock.

15. Final Assembly – 78634-01 — AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02 | AD 73-04 02

To be completed after powder coating.

a. Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
b. For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
c. For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
d. If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
e. Adhere P/N placard to back surface of beam.
f. Green tag complete beam assembly and place into stock.

Work Order: 2016-99

Date Opened: 03 Aug 16

Material Tracking Sheet
Eurocopter AS350/AS355 Forward Mounting Beam

× 30

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	30		**78634-01-00**	**Forward Beam Assembly**		
Step 1				*Fabrication*		
	. 1		78634-02	Tube	1x2x0.065 Tube, 304 Stainless Steel	16024
Step 2				*Machning*	*None*	
Step 4				*Fabrication*		
	. 3		78634-03	Pad	1x0.125 Bar, 304 Stainless Steel	16058 / 15073
	. 1		78634-11	Pad	1x0.125 Bar, 304 Stainless Steel	16058 / 15073
	. 1		78634-12	Pad	1x0.125 Bar, 304 Stainless Steel	16058 / 15073
	. 1		78634-04	Cap	0.025" Sheet, 321 Stainless Steel	3021
	. 4		78630-04	Bushing	0.375 x 0.065 Tube, 304 Stainless Steel	15073 / 2016-99
	. 2	69830	69830-11	Guide	0.75 x 0.065 Tube, 304 Stainless Steel	2016-16 / 2016-79
	1		69830-07	Block		2016-77
Step 6				*Welding*		
	. A/R		--	Welding Rod	ER308L	14028
Step 7				*Straightening*	*None*	
Step 8				*Machning*	*None*	
Step 10				*Welding*		
	. A/R		--	Welding Rod	ER308L	14028
Step 11				*Finishing*	*None*	
Step 12				*Final Inspection*	*None*	
Step 13				*Powder Coating*		16065 / 17012 (10) (20)

Work Order:_____

Date Opened:_____

Material Tracking Sheet
Eurocopter AS350/AS355 Forward Mounting Beam

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 15				*Final Assembly*		
	. 2	69830	69830-21	Stop	0.625 Rod, 6061-T6 Aluminum	
	. 2	69830	69830-22	Knob	0.75 Rod, 6061-T6 Aluminum	
	. 2	69830	69830-23	Spring	15mm x 70mm Spring, Stainless Steel	
	. 2		69830-1032X3	3" #10-32 C'sunk screw	Stainless Steel	
	. 2		MS21044C3	Nut		
	. 1		--	P/N Placard	TZ Tape, 1/2", black on white	

Ref only.

MINOR CHANGE REPORT

MCR78634-1

AIRBUS HELICOPTERS AS350/AS355

FORWARD MOUNTING BEAM

Additional rosette weld on guide tubes

Prepared by: Jeff Clarke P.Tech.(Eng.)

Revision 0, 06 January 2016

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TABLE OF CONTENTS

1.0 INTRODUCTION

The forward mounting beam incorporates the quick release mechanism for mounting a cargo basket or other components on the AS350. One operator has noted that following landing in deep snow the guide tube in the forward mounting beam was deflected, making release of the basket difficult due to mis-alignment of the stop pin.

This change is to add additional rosette welds to support the guide tube.

2.0 MANUFACTURING REVIEW BOARD ATTENDEES

The following individuals from the Manufacturing Review Board were included in this review:
Jason Rekve – PRM
Jeff Clarke – Quality Assurance Manager, Engineering Technologist

3.0 DETAILS OF MINOR CHANGE

3.1 Affected Parts / Assemblies

Original drawing: 78634, Revision 1
Part number: 78634-01-00
Description: Forward Beam, AS350

3.2 Description of Change

1. Add rosette weld 1" below existing rosette weld on both sides.

4.0 ASSESSMENT

4.1 Impact Assessment

All sections must be answered with a yes or no.

Assessment Criteria	Y/N
(a) **Operating Limitations**	
Does the change involve or require a revision in the operating limitations specified in the approved type design?	No
(b) **Structural Strength** Does the change alter:	
(1) a principal component of the aircraft structure such as a frame, stringer, rib, spar, skin or rotor blade?	No
(2) a life-limited part or a structural element that is subject to a damage tolerance assessment or fail-safe evaluation?	No
(3) the strength or structural stiffness of a pressure vessel?	No
(4) the mass distribution in a structural element?	No
(5) a containment or restraint system intended for occupants or the storage of items of mass (e.g. cargo)?	No
(6) the structure of seats, harnesses, or their means of attachment?	No
(c) **Powerplant Operation** Does the change:	
(1) affect the power output or control qualities of the powerplant, engine, propeller, or their accessories?	No
(2) alter the approved operating limitations?	No
(d) **Performance and Flight Characteristics** Does the change involve alterations that:	
(1) significantly increase drag or exceed aerodynamic smoothness limits?	No
(2) significantly alter thrust or power output?	No
(3) affect stability or controllability?	No
(4) induce flutter or vibration?	No
(5) affect the stall characteristics?	No
(e) **Other Qualities Affecting Airworthiness** Does the change:	
(1) change the information on, or the location of, a placard required by the type design or an Airworthiness Directive?	No
(2) alter any information contained in the approved section of the aircraft flight manual or equivalent publication?	No
(3) affect the flight-crew's visibility or their ability to control the aircraft?	No
(4) affect egress from the aircraft?	No
(5) reduce the storage capacity of an oxygen system, or alter the oxygen rate of flow?	No
(6) affect flight controls or an autopilot?	No
(7) alter an electrical generation device, or the electrical distribution system between the generating source and either its primary distribution bus, or any other bus designated as an essential bus?	No
(8) reduce the storage capacity of the primary battery?	No
(9) affect a communication system required by the approved type design?	No
(10) affect instruments, or indicators that are installed as part of a system required by the approved type design?	No
(f) **Other Qualities Affecting Environmental Characteristics**	
Does the change increase aircraft noise levels or emissions?	No

5.0 CERTIFICATION BASIS

Aircraft: Airbus Helicopters AS350/AS355, TCDS H-83, H-87

Modification: Compliance Program CP940, Revision 1

Certification Basis: FAR Part 27, dated 2 October 1964, including amendments 27-1 through 27-20 plus specific paragraphs of amendment 27-21.

This change remains in compliance with the basis of certification established for the modification.

6.0 JUSTIFICATION

This modification is considered minor in accordance with CAR 521.154 for the following reasons:

1. The change has been assessed in accordance with the definition of major modification in accordance with CAR 571, and found to be an other than major modification, see section 4.1.
2. Analysis

   The approved configuration has been demonstrated to support the upward loads specified in the regulations with one rosette weld on both sides of the beam.

   This operator is using the basket for heli-ski operations, landing in snow. Many operators use this model of cargo basket for the same operation. Deflection of the stop pin has not been reported by any other operators.

   The existing welds on the guide tube are located near the top end of the guide. When the basket is loaded upward on landing in snow, the attachment lug pushes on the side of the stop pin, which then causes the guide tube to rotate on the single rosette weld, until the stop pin touches the far side of the keyway. To resist rotation, an additional rosette weld is added near the bottom of the guide tube.

   Strength of the modified beam is increased over the existing approved configuration. Weight change is negligible.

7.0 IMPLEMENTATION

7.1 Short Term

1. New parts may be fabricated in accordance with revised drawing 78634, Revision 2, until such time as the approval documents can be revised (see long term). This report may be referenced as justification.

For the reasons listed in section 6.0

Approved: Person Responsible for Manufacturing — Date: 06 Jan 16

7.2 Long Term

1. Revise document control list DCL786-3 to include drawing 78634, Revision 2. Include on approval at next re-issue.

Approved: Person Responsible for Manufacturing — Date: 06 Jan 16

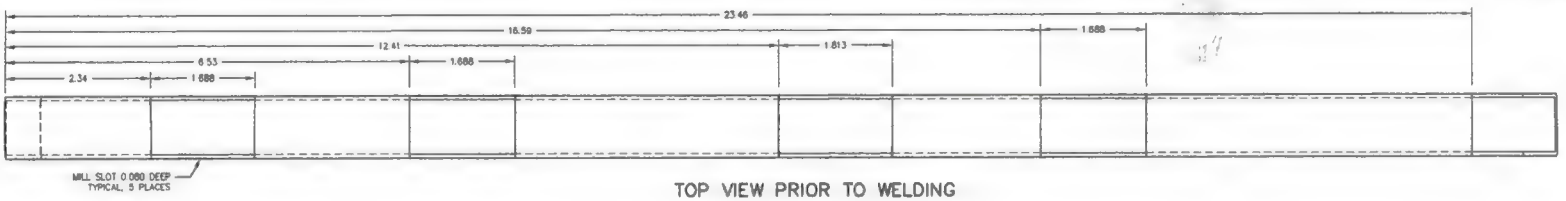
8.0 DOCUMENT CONTROL

The following documents have been included with or attached to the original work order file (initial):

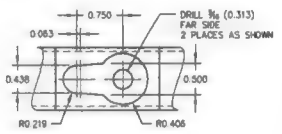
	Electronic	Hardcopy
This report	☒ by: JC	☒ by: JC
Drawing 78634, Revision 2	☒ by: JC	☒ by: JC

2016-99 x 20

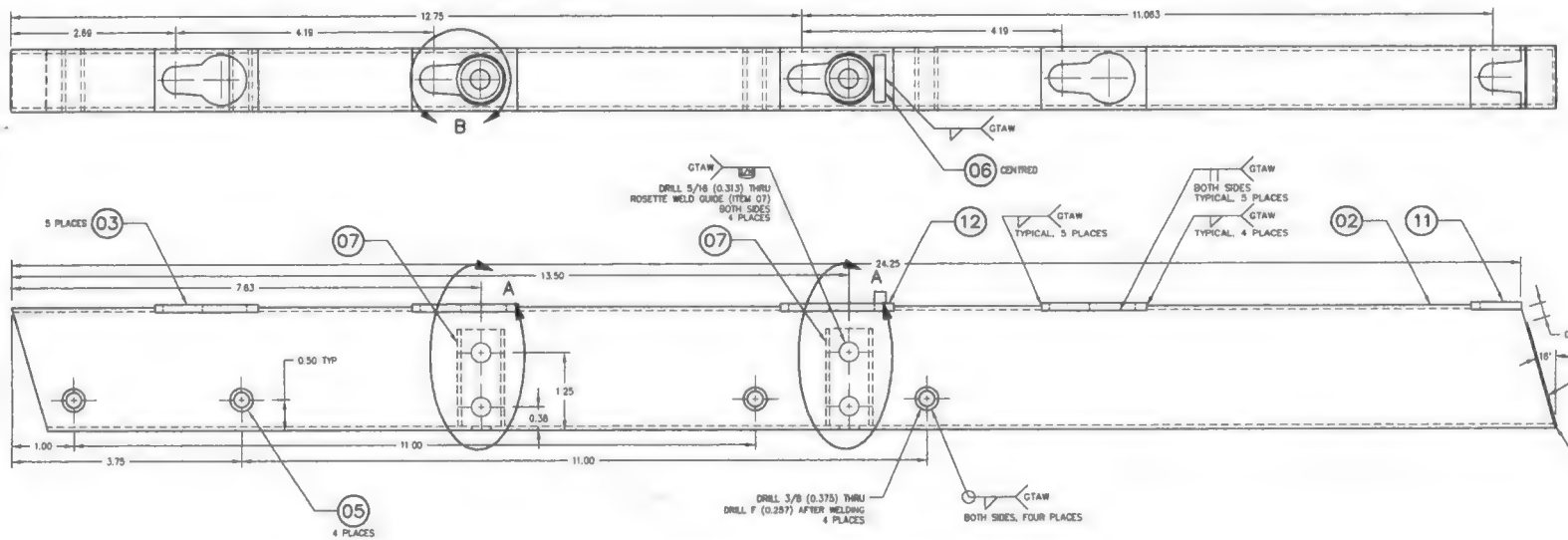
REV	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE -- CREATED FROM 78632	BJC	APR 01/10
1	TITLE BLOCK UPDATED, PADS (ITEM 11, 12) ADDED, ALTERNATE FINISH	BJC	11/07/2014
	CAP (ITEM 04) MATERIAL CHANGED, SLOT DEPTH INCREASED		
2	SECOND WELD ADDED TO GUIDE TUBE	BJC	06/01/2016



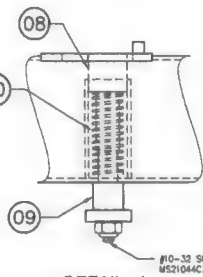
TOP VIEW PRIOR TO WELDING



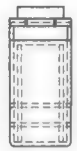
DETAIL B
TYPICAL, ALL KEYWAYS

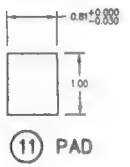


01 78634-01-00 BEAM ASSEMBLY

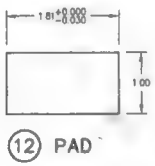


DETAIL A
ASSEMBLY AFTER FINISHING

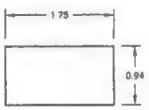




11 PAD

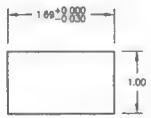


12 PAD



04 CAP

05 BUSHING



03 PAD

QTY	ITEM	PART NO	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
		78634-01-00	01 BEAM ASSEMBLY			
1	12	78634-12	PAD	304 STAINLESS STEEL	ASTM A240	1.0 X 0.125 BAR
1	11	78634-11	PAD	304 STAINLESS STEEL	ASTM A240	1.0 X 0.125 BAR
2		MS21044C3	NUT			
2		#10-32	C'SUNK SCREW	STAINLESS STEEL	COMMERCIAL	
1	10	69830-23	SPRING	STAINLESS STEEL	COMMERCIAL	15mm X 70mm SPRING
2	09	69830-22	KNOB	6061-T6 ALUMINUM	QQ-A-200/8	Ø0.75 ROD
2	08	69830-21	STOP	6061-T6 ALUMINUM	QQ-A-200/8	Ø0.625 ROD
1	07	69830-11	GUIDE	304 STAINLESS STEEL	ASTM A269	Ø0.75 X 0.065 RND TUBE
1	06	78634-07	BLOCK	304 STAINLESS STEEL	ASTM A479	0.188 SQR ROD
4	05	78634-04	BUSHING	304 STAINLESS STEEL	ASTM A269	Ø0.375 X 0.065 RND TUBE
1	04	78634-04	CAP	304 STAINLESS STEEL	AMS 5513	0.050 SHEET
3	03	78634-03	PAD	304 STAINLESS STEEL	ASTM A240	1.0 X 0.125 BAR
1	02	78634-02	TUBE	304 STAINLESS STEEL	ASTM A554	1 X 2 X 0.065 TUBE

LIST OF MATERIALS

NOTES

1. REMOVE ALL BURRS AND BREAK SHARP EDGES
2. WELDING OF 304 STAINLESS STEEL TO BE COMPLETED BY GTAW METHOD TO AMS2685C WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT
3. FINISH: ALL STEEL PARTS TO BE THOROUGHLY DEGREASED AND POWDER COATED PRIOR TO ASSEMBLY. ALTERNATE: ALL STEEL PARTS TO BE THOROUGHLY DEGREASED, PRIMED AND PAINTED PRIOR TO ASSEMBLY.

APPROVALS		DATE
DRAWN	JEFF CLARKE	01 APR 2010
CHECKED	E BURGOIN	06 JUN 2010

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS: X.XXX ±0.010, X.XX ±0.03, X.X ±0.1
ANGLES: ±1/2°

AERO DESIGN LTD.
9868A MALASPINA ROAD
POWELL RIVER, BC, CANADA, V8A 0G3
TEL: 604.485.8578 www.aerodesign.ca

AIRBUS HELICOPTERS AS350 & AS355 SERIES
ATTACHMENT PROVISION
FORWARD BEAM FABRICATION

SCALE 1 : 1	DWG SIZE	DWG NO.	REV.
SHEET 1 OF 1	A1	78634	2

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2016-0147

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	2	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	07 Sept 2016		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

West Coast Heli

Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

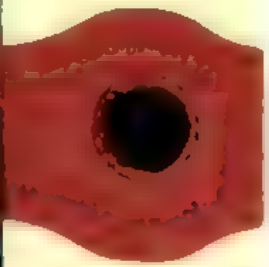
Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99 PO#: N/A

West Coast Heli

Aero Design
Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	AS350 FWD BEAM	78634-01-00	



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

West Coast Heli

Aero Design
Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	AS350 FWD BEAM	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2016-0183

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	29 Sept 2016		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

AIRBUS HELICOPTERS

Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design
Parts Distribution Sheet

WO# 2016-99

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-99	1	FORWARD BEAM	78634-01-00	
		SEE ATTACHED PDS FOR PINS.		

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE				3.Form Tracking No.
Transport Canada					2016-0215
4. Organization Name and Address					5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					WO 2016-99
6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New
12. Remarks					

13a. Certifies that the items identified above were manufactured in conformity to:	14a. ☐ CAR 571.10 Maintenance Release ☐ Other regulation specified in block 12
☒ Approved design data and are in condition for safe operation. ☐ Non approved design data specified in block 12.	Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	18 Nov 2016		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

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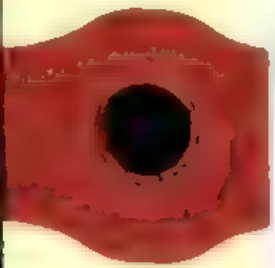
AIRBUS HELICOPTERS



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
13027	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	AS350 FWD BEAM	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2016-0220

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12.

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	18 Nov 2016		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

AIRBUS HELICOPTERS

Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99 PO#: N/A

Aero Design
Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	AS350 FWD BEAM	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2016-0224

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	21 Nov 2016		

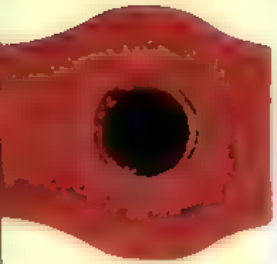
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

JMS NEW ZEALAND



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99 PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	A350 FWD BEAM	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0041

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

~~14a.~~ ☐ ~~CAR 571.10 Maintenance Release~~

☐ ~~Other regulation specified in block 12~~

~~Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.~~

13b. Signature	13c. Approved Organization Number	~~14b. Signature~~	~~14c. Approved Organization Number~~
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	~~14d. Name~~	~~14e. Date (dd/mmm/yyyy)~~
Jeff Clarke - AD02	30 Jan 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

Rev. 1, 30/01/2017 – Form tracking # (block 3) corrected; Signature date (block 13e.) updated to today.

AD
73-04
02

DELTA HELICOPTERS

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2016-0224

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	21 Nov 2016		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

DELTA HELICOPTERS

Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	FWD BEAM	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0054

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12.

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	31 Jan 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

HELI PRODUCTS INDUSTRIES

Aero Design Ltd.
9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
13027	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-99	1	FORWARD BEAM	75634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0060

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	2	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

~~14a.~~ ☐ ~~CAR 571.10 Maintenance Release~~

☐ ~~Other regulation specified in block 12~~

~~Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.~~

13b. Signature	13c. Approved Organization Number	~~14b. Signature~~	~~14c. Approved Organization Number~~
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**~~14d. Name~~**	**~~14e. Date (dd/mmm/yyyy)~~**
Jeff Clarke - AD02	01 Feb 2017		

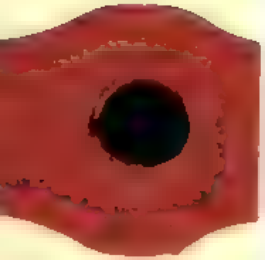
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

ICE BIKES

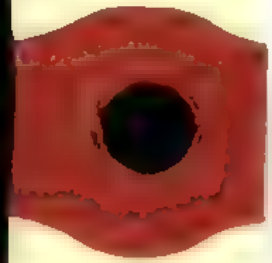


Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design Ltd.
9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)



Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter
Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99
PO#: N/A

Aero Design
Parts Distribution Sheet

WO# _____

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-99	2	FWD Beam	78634-01-00	

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
13027	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	

Aero Design
Parts Distribution Sheet

WO# ______

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Stop pin	69830-21	
2016-61	1	Knob	69830 22	
15071	1	Beam Spring	69878-01	
16080	1	SS Nut	MS21044C3	
03~~48~~13027	1	SS screw		

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0067

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	3	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12.

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	02 Feb 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

Sundance Helicopters

Aero Design
Parts Distribution Sheet

WO# _____

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-99	3	FWD BEAM	78634-01-00	
2016-18	5	STOP PIN	69830-21	
2016-61	5	KNOB	69830-22	
16016	5	SCREW	#10-32 C'SUNK x3	
16080	5	NUT	MS21044C3	
15071	5	SPRING	69870-01	
		2 STOPS IN 2 BEAMS		
		1 STOP IN 1 BEAM		

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0075

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	11 Feb 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

RAVCO

Aero Design Ltd.
9888 A Malaspina Rd. Powell River, BC, V8A 0G3
Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: KNOB No. of pieces: 9

Manufacturer: AERO DESIGN LTD.

Part No.: 6983D 22 Serial No.: NSN

TTSN: N/A TSO: N/A Rem.: N/A

Work Order No.: 2016-61

Remaining Tasks to be Performed: NONE

Signature:

Date: 18 AUG 2016 Lic. No. / SCA AO 73-04 02

Serviceable

Aero Design Ltd.

9888 A Malaspina Rd. Powell River, BC, V8A 0G3

Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Remarks

Serviceable

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO#
2016-18	1	Stop	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
13027	1	Screw	10-32 x 3	
13048	1	Nut	MS21044C3	
2016-95	1	AS350 FWD Beam	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0086

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

~~14a.~~ ☐ ~~CAR 571.10 Maintenance Release~~

☐ ~~Other regulation specified in block 12~~

~~Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.~~

13b. Signature	13c. Approved Organization Number	~~14b. Signature~~	~~14c. Approved Organization Number~~
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**~~14d. Name~~**	**~~14e. Date (dd/mmm/yyyy)~~**
Jeff Clarke - AD02	14 Feb 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

HIMALAYA HELI SKI GUIDES

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	#10-32x3 Screw	commercial	
16080	1	Nut	MS21044C3	
2016-99	1	AL350 END BEAM	75634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0089

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		

13d. Name	13e. Date (dd/mmm/yyyy)	14d. Name	14e. Date (dd/mmm/yyyy)
Jeff Clarke - AD02	23 Feb 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

Access Helicopters

Aero Design
Parts Distribution Sheet

WO# 296-99

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-99	1	ASSY FWD BEAM	75634-01-00	
2016-18	1	STOP	69830-21	
2016-61	1	KNOB	69830-22	
16016	1	SCREW	#10-32x3 Commercial	
15071	1	SPRING	69830-23	
16040	1	NUT	MS21044C3	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0101

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

~~14a.~~ ☐ ~~CAR 571.10 Maintenance Release~~

☐ ~~Other regulation specified in block 12~~

~~Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.~~

13b. Signature	13c. Approved Organization Number	~~14b. Signature~~	~~14c. Approved Organization Number~~
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	~~14d. Name~~	~~14e. Date (dd/mmm/yyyy)~~
Jeff Clarke - AD02	01 Mar 2017		

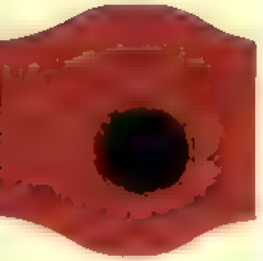
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

AIRBUS HELICOPTERS



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99 PO#: N/A

Aero Design
Parts Distribution Sheet

WO# _____

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-99	1	AS350 FWD BEAM	78634-01-00	
2016-18	1	STOP PIN	64830-01	
2016-61	1	KNOB	64830-22	
15071	1	SPRING	64830-23	
16016	1	SCREW	#10-32x3 commercial	
16080	1	NUT	MS21044C3	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0106

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
PD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	01 Mar 2017		

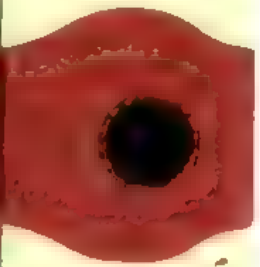
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

MBR



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design
Parts Distribution Sheet

WO# _____

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-99	1	ASSY PIN SEAT	75634-01-00	
2016-18	+2 ea	STOP PIN	64830-21	
2016-61	+2 ea	KNOB	64830-22	
15071	+2 ea	SPRING	64830-23	
16016	+2 ea	SCREW	#10-32x3 commercial	
16050	+2 ea	NUT	MS21044C3	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0111

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	4	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	02 Mar 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

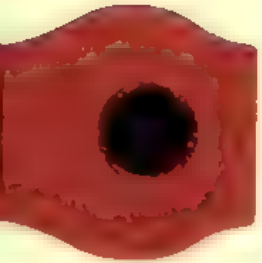
Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

SUNDANCE HELICOPTERS

Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

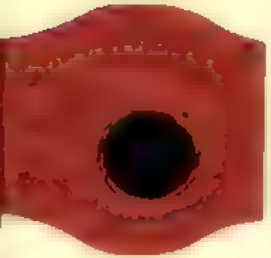
Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

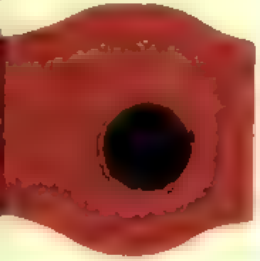
Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A



Aero Design Ltd.
9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter
Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99
PO#: N/A

Aero Design
Parts Distribution Sheet

WO# _____

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-59	+4	AS350 FWD SEAM	75634-01-00	
2016-8	+8	STOP PIN	64830-01	
2016-61	+8	KNOB	64830-02	
15071	+8	SPRING	64830-23	
16016	+8	SCREW	#10-32x3 commercial	
16050	+8	NUT	MS21044C3	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0120

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

~~14a.~~ ☐ ~~CAR 571.10 Maintenance Release~~

☐ ~~Other regulation specified in block 12~~

~~Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.~~

13b. Signature	13c. Approved Organization Number	~~14b. Signature~~	~~14c. Approved Organization Number~~
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	~~14d. Name~~	~~14e. Date (dd/mmm/yyyy)~~
Jeff Clarke - AD02	14 Mar 2017		

Installer Responsibilities

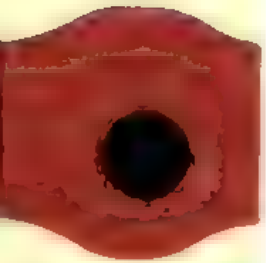
This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

~~HIGH TERRAIN HELICOPTERS~~ JC

JAMTLANDS FLYG JC 21 MAR 2017



Aero Design Ltd.
9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1
PN: 78634-01-00
Aircraft: Eurocopter
Model: AS350/355
Description: Forward Beam
Supplier: N/A
Color: White
WO#: 2016-99
PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	#10-32x3 Screw	commercial	
16080	1	Nut	MS21044C3	
2016-99	1	A535D Fwd Beam	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0136
4. Organization Name and Address		5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3		WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:	14a. ☐ CAR 571.10 Maintenance Release ☐ Other regulation specified in block 12
☒ Approved design data and are in condition for safe operation. ☐ Non approved design data specified in block 12.	Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	11 Apr 2017		

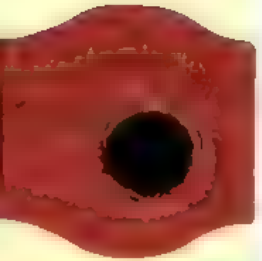
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

JF MUGNIER



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

JF MUGNIER

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	#10-32x3 Screw	commercial	
16080	1	Nut	MS21044C3	
2016-99	1	AS350 FWD BEAM	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0142

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

14a. ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	12 Apr 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

AIRBUS HELICOPTERS

Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	#10-32x3 Screw	commercial	
16080	1	Nut	MS21044C3	
2016-99	1	AS350 FWD BEAM	78634-01-00	

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	#10-32x3 Screw	commercial	
16080	1	Nut	MS21044C3	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0147

4. Organization Name and Address	5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3	WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:

☒ Approved design data and are in condition for safe operation.

☐ Non approved design data specified in block 12.

~~14a.~~ ☐ CAR 571.10 Maintenance Release

☐ Other regulation specified in block 12.

Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	~~14b. Signature~~	~~14c. Approved Organization Number~~
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**~~14d. Name~~**	**~~14e. Date (dd/mmm/yyyy)~~**
Jeff Clarke - AD02	13 Apr 2017		

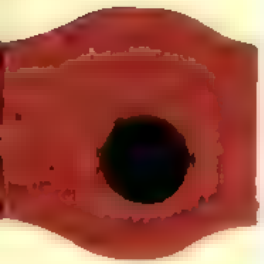
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

HORIZON HELICOPTERS



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Horizon Helicopters

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	1	Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69878-01	
16016	1	#10-32x3 Screw	commercial	
16080	1	Nut	MS21044C3	
2016-99	1	4535D FWD BEAM	75634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE				3.Form Tracking No.
Transport Canada					2017-0159
4. Organization Name and Address					5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					WO 2016-99
6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	2	N/A	New
12. Remarks					

13a. Certifies that the items identified above were manufactured in conformity to:	14a. ☐ CAR 571.10 Maintenance Release ☐ Other regulation specified in block 12.
☒ Approved design data and are in condition for safe operation. ☐ Non approved design data specified in block 12.	Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	24 Apr 2017		

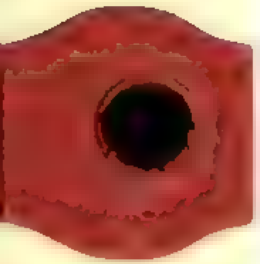
Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

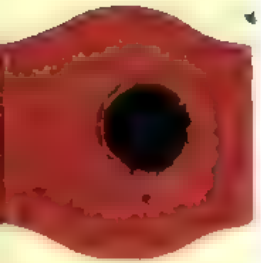
HELI AUSTRIA



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design

Parts Distribution Sheet

Description: Beam Pin WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-18	4	Pin	69830-21	
2016-61	4	Knob	69830-22	
15071	4	Spring	69878-01	
16016	4	#10-32x3 Screw	commercial	
16080	4	Nut	MS21044C3	
2016-99	2	AS350 Fwd Beam	78634-01-00	

1. Approving Civil Aviation Authority/Country	2. AUTHORIZED RELEASE CERTIFICATE FORM ONE	3.Form Tracking No.
Transport Canada		2017-0182
4. Organization Name and Address		5. Work Order/Contract/Invoice
AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3		WO 2016-99

6. Item	7. Description	8. Part Number	9. Qty.	10. Serial/Batch No.	11. Status/Work
1.	Forward Beam	78634-01-00	1	N/A	New

12. Remarks

13a. Certifies that the items identified above were manufactured in conformity to:	14a. ☐ CAR 571.10 Maintenance Release ☐ Other regulation specified in block 12
☒ Approved design data and are in condition for safe operation. ☐ Non approved design data specified in block 12.	Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Approved Organization Number	14b. Signature	14c. Approved Organization Number
AD 73-04 02	AMF 73-04		
13d. Name	**13e. Date (dd/mmm/yyyy)**	**14d. Name**	**14e. Date (dd/mmm/yyyy)**
Jeff Clarke - AD02	11 May 2017		

Installer Responsibilities

This certificate does not constitute authority to install.

Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.

Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

LR HELICOPTERS

Aero Design Ltd.

9888 A Malaspina Rd. Powell River, BC, V8A 0G3

Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: FORWARD BEAM (AS350) No. of pieces: ~~to~~ 20 [illegible]

Manufacturer: AERO DESIGN

Part No.: 78634-01-00 Serial/Batch No.: NSN

TTSN: N/A TSO: N/A Rem.: N/A

Work Order No.: 2016-99

Remaining Tasks to be Performed: ASSEMBLY

Signature: [signature]

Date: 02 SEPT 2016 Lic. No. / SCA AD02

Form# 20.E.03 Rev. 1 24 April 2014

In Process

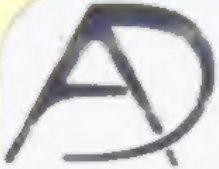
Aero Design Ltd.
9888 A Malaspina Rd. Powell River, BC, V8A 0G3
Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

In Process

Remarks

10 Completed
20 additional to be completed



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:	1	
PN:	78634-01-00	
Aircraft:	Eurocopter	Model: AS350/355
Description:	Forward Beam	
Supplier:	N/A	
Color:	White	
WO#:	2016-99	PO#: N/A

Aero Design

Parts Distribution Sheet

Description: AS350 Forward Beam WO#

From PO or WO #	Quantity	Description	Part Number	For WO #
2016-89	1	Forward Beam	78634-01-00	
2016-18	1	Stop Pin	69830-21	
2016-61	1	Knob	69830-22	
15071	1	Spring	69830-23	
16016	1	#10-32 x 3 C'sunk SS Screw	commercial	
16050	1	Nut	MS21044C3	